18. Explain the concept of SECAM encoder and decoder.

19. Draw the block diagram of a PAL colour receiver.

20. Draw the block diagram of satellite TV systems and explain its operation.

APRIL/MAY 2025

FEL61/CEL61/BEL61 — TELEVISION AND VIDEO ENGINEERING

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. What is the basic principle of a camera tubes?

2. List out the applications of vidicon camera tube.

3. What is a diplexer?

4. What is the gain of video amplifier?

5. What are the drawbacks of Delta-Gun picture tube?

6. List the features of PAL colour system.

7. List the functions of TV tuner.

8. What is the function luminance channel?

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9. Why are up-link and down-link frequencies chosen to be in GHz range.

10. Distinguish between VCD and DVD.

SECTION B — (5 × 5 = 25 marks)

Answer ALL the questions.

11. (a) Discuss the characteristics of a human eye.

Or

(b) Draw the cross sectional view and explain the operations of silicon diode array vidicon.

12. (a) Write a note on sky wave propagation.

Or

(b) Explain the various sections of VHF tuner with block diagram.

13. (a) Write a short note on degaussing operation in colour television.

Or

(b) Compare the performance of NTSC, PAL and SECAM systems.

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14. (a) Write short note on separation of U and V modulation products.

Or

(b) Describe burst gate amplifier with circuit diagram.

15. (a) Illustrate the concept of scrambling technique.

Or

(b) List out the applications of video disc systems.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. What is a composite video signal? Draw and explain the construction and working of vidicon camera tube in detail.

17. With the help of a neat diagram, discuss the monochrome TV receiver in detail.